

ABSTRACT OF THE DISCLOSURE

A method of warming up a fuel evaporator is disclosed. The fuel evaporator 2 comprises: an evaporation chamber 2b equipped with a first injection device 2a for injecting raw fuel liquid onto a heat source 2p, and vaporizing the raw fuel liquid on the heat source; a catalyst combustor 20 having a combustion catalyst 22a, and introducing catalytically burned combustion gas into the heat source; a second injection device 30 for supplying fuel to the catalyst combustor; a combustion gas transferring device 10 equipped with a fuel injection portion 10a and a combustion catalyst 10c, and the fuel injection portion injecting fuel onto the combustion catalyst to generate a catalytically burned gas; a first temperature measurement device T1 for the catalyst combustor; and a second temperature measurement device T2 for the evaporation chamber. The warm-up method comprises the steps of: transferring the combustion gas with the combustion gas transferring device; stopping the combustion gas transferring device in accordance with a temperature of the catalyst combustor, and transferring fuel to the catalyst combustor with the second injection device; and injecting the raw fuel liquid from the first injection device in accordance with a temperature of the evaporation chamber so as to vaporize the raw fuel liquid within the evaporation chamber.